AKIRA

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Air Conditioner

Service Manual

Большая библиотека технической документации
http://splitoff.ru/tehn-doc.html
каталоги, инструкции, сервисные мануалы, схемы.

MODEL:
AC-W10CG

Все каталоги и инструкции здесь: http://splitoff.ru/tehn-doc.html

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TECHNICAL SPECIFICATION

Content		AC-W10CG
Function		Cooling
Power supply		1Ph 220~230V-50Hz
Capacity (W)		2500
Rated input (W)		1020
Rated current (A)		4.8
Air flow (m^3/h)		380
Dehumidifying volume (L/h)		1.19
EER(W/W)		2.4
Indoor side	Fan type/piece	Centrifugal fan-1
	Diameter-length(mm)	180mm x 85
	Evaporator	Aluminum –copper
	Row-fin distance(mm)	2-1.3
	Working area(m^2)	0.074
	Swing motor	SM021
	Input/Speed	2.5W-6r/min
	Noise(dB(A))	50
Outdoor unit	Compressor type	Rotary
	Compressor Model	2P17C225C NB
	Compressor input Power (W)	910
	L.R.A. (A)	20
	Protection device	External overload protector
	Starting method	Capacity
	Working temp.	≤115°C
	Condenser	Aluminum-copper
	Row-fin distance (mm)	2-1.8
	Working area (m^2)	0.12
	Fan type-piece	Axial flow fan-1
	Fan diameter (mm)	310
	Throttling method	55
	Noise (dB(A))	55
Motor fan speed (rpm)		1100
Working capacitor (μF)		3.5μ F/450V45
Dimension (W x H x D) (mm)		450 x 350 x 580
Net weight (kg)		35
Refrigerant charge		R22/550g

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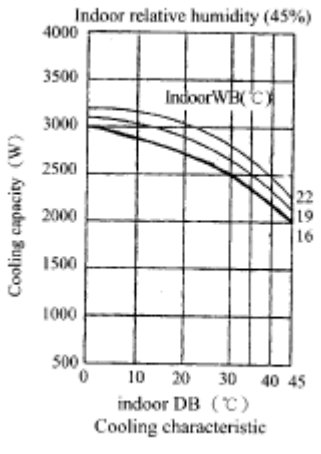
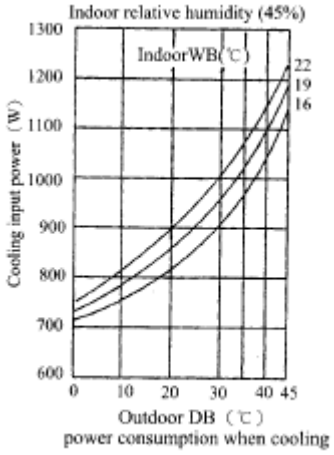
PERFORMANCE CURVE



Cooling characteristic



power consumption when cooling

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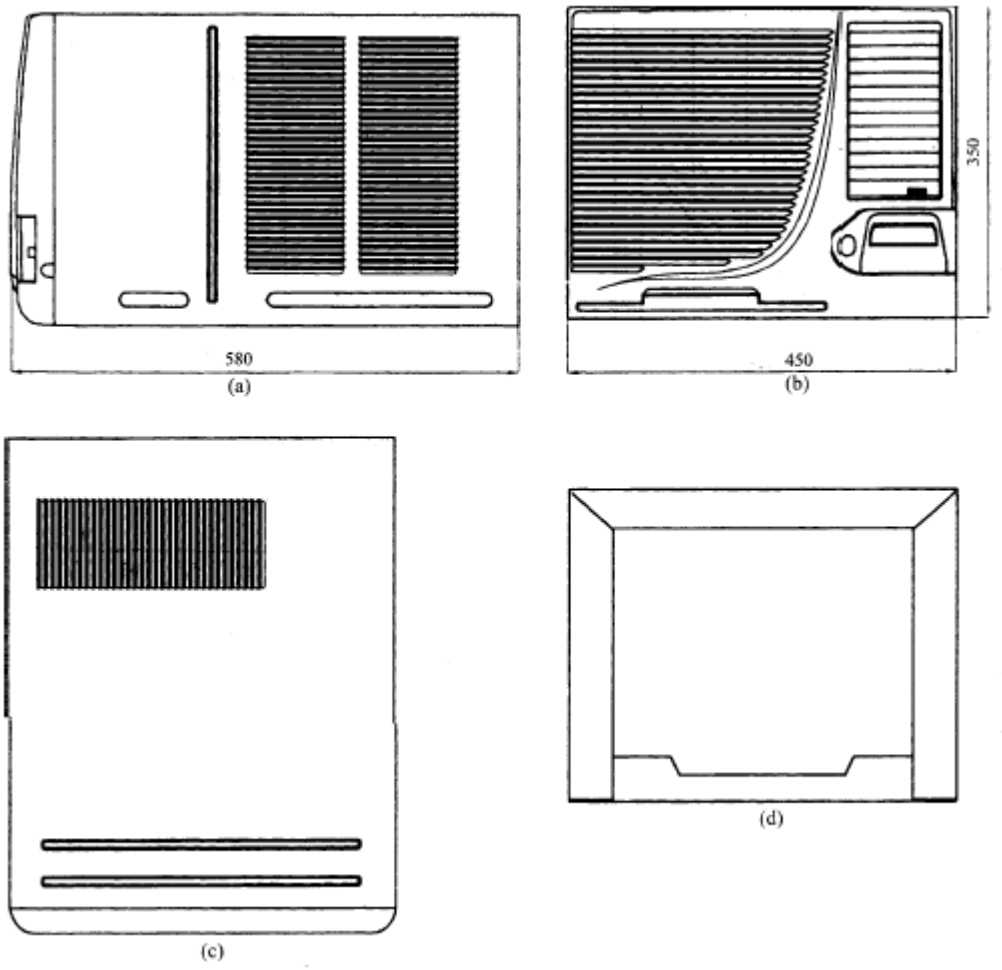
OUTLINES AND DIMENSIONS



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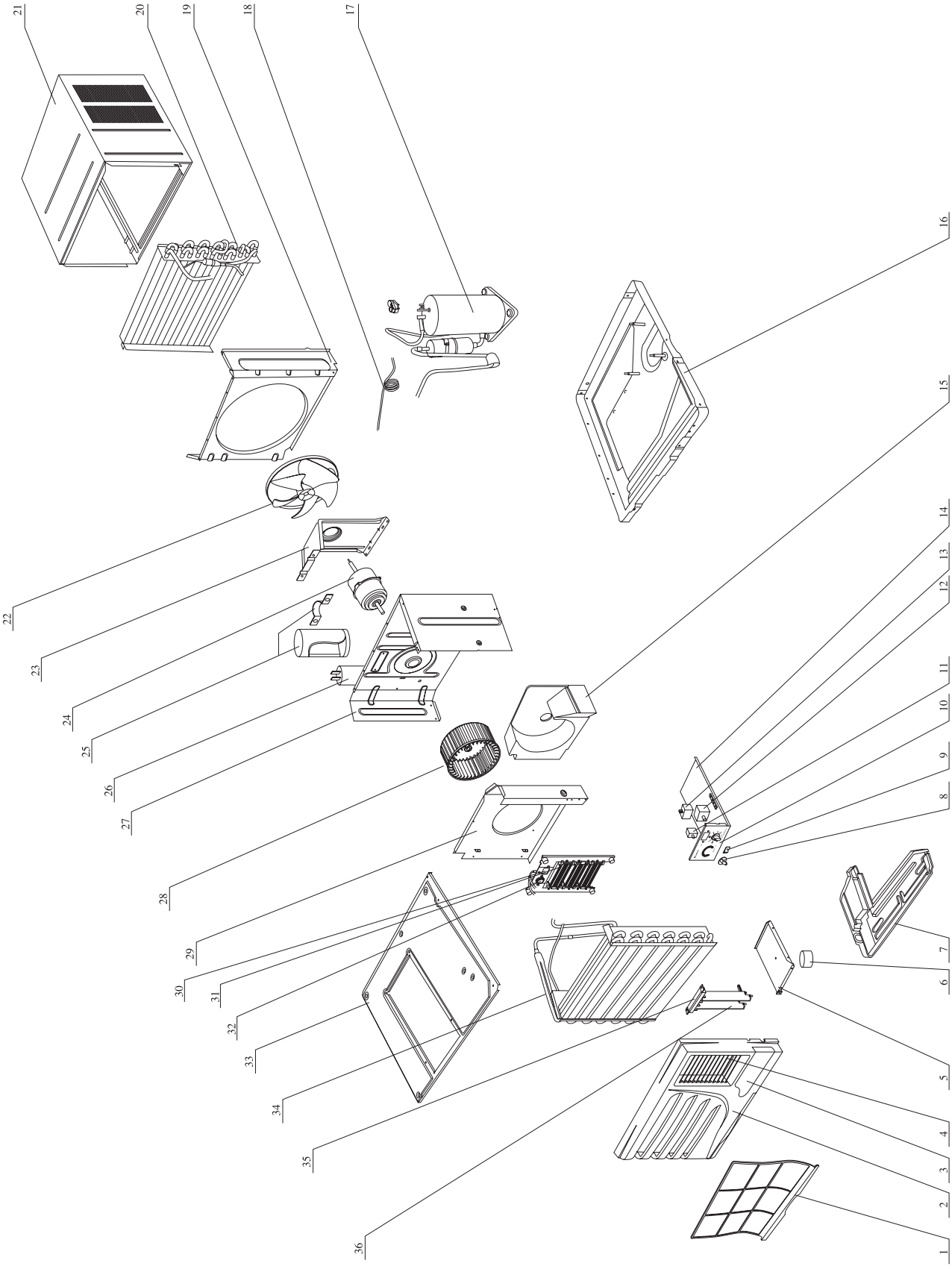
EXPLODED VIEW & PART LIST



Model No.: AC-W10CG
Version: 1.0

Все каталоги и инструкции здесь: http://splitoff.ru/tehn-doc.html

No.	Description	Qty
1	Fliter net A	1
2	Front panel	1
3	Cover of switch	1
4	Horizontal air guider	12
5	base plate	1
6	Swing motor	1
7	Drain pan	1
8	Knob	2
9	Swing switch	1
10	Mask	1
11	Thermostat	1
12	Main switch	1
13	fan capacitor	1
14	Electric box	1
15	Propeller housing	1
16	Chassis assembly	1
17	Compressor	1
18	Capillary assembly	1
19	Rear insulation plate	1
20	Condensor	1
21	Cabinet	1
22	Axial flow fan	1
23	Motor support	1
24	Motor	1
25	Capacitor box clamp	1
26	Compressor capacitor	1
27	front insulation plate	1
28	Centrifugual fan	1
29	insulation plate of housing	1
33	Top connection plate	1
34	Evaporator	1
35	Cross beam assembly	1
36	Air guider	1
	Power cord	1

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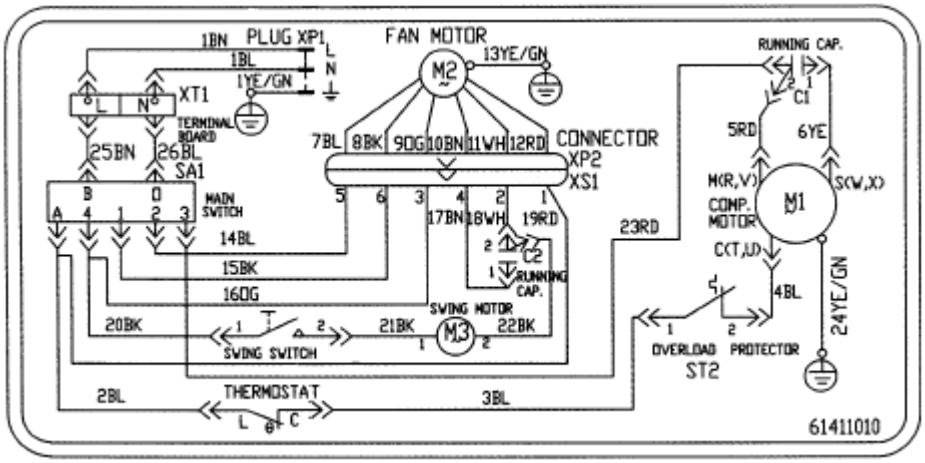
CIRCUIT DIAGRAM

These circuit diagrams are subject to change without notice. Please refer to the ones stuck on the machines.



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PCB FUNCTION MANUAL

A. Running mode

1. Cool
2. Dry
3. Fan
4. Heat
5. Auto
6. Manual operation

B. Controlling contents

1. Indoor unit fan motor (high, middle and low speed)
2. Compressor
3. Sweep fan motor
4. Buzzer
5. Reversing valve
6. Electrical heater

C. The parameter to be input

1. The set mode
2. The set temperature of the indoor (shorten form is Test)
3. The set speed
4. The mode of timer
5. The ambient temperature of the indoor unit (shorten form is Tin)
6. The temperature of the defrosting sensor (shorten form is Tde)
7. The sweep mode

D. The basal control modes

Cooling mode

1 If $T_{in} \geq T_{set} + 1^oC$ cooling mode act, compressor run, unit fan motor and sweep fan motor run in the set speed, reversing valve stop.
2 If $T_{in} \leq T_{set} - 2^oC$ compressor stop, unit fan motor and sweep fan motor run in the set speed.
3 If $T_{set} - 2^oC < T_{in} < T_{set} + 1^oC$ keep running in the old mode.
4 In the cooling mode, the range of T_{set} is $16^oC \sim 30^oC$ and it can be set in CON.
5 Compressor restart in 3 min after the unit stop and won't stop during the following 6 min because T_{in} and T_{set}.

Drying mode

1 If $T_{in} > T_{set}$, drying mode act.
2 If $T_{in} < T_{set}$ drying mode stop, compressor stop, unit fan motor run in low speed.
3 If $T_{in} \leq T_{set}-2^oC$, compressor and fan motor stop.
4 Unit fan motor run for 6 min in low speed, compressor stop, fan motor run in low speed. After 4 min, unit fan motor running low speed for 6min. Then run by this cycle.
5 In drying mode, the range of T_{set} is $18^oC \sim 30^oC$ and it can be set in CON.
6 The protecting functions are same as cooling mode.

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Fan mode

1 Unit fan motor can run in high, middle, low and auto speed, compressor stop.
2 If the different in temperature of T_{in} and T_{set} is 2~4°C, motor run in middle speed.
3 If the different in temperature of T_{in} and T_{set} is less than 2°C, motor run in low speed.
4 If the different in temperature changed, fan speed will change when the new difference is more or less 1°C than the old one.
5 In drying mode, the range of T_{set} is 18°C ~ 30°C and it can be set in CON.
6 There is no protection mode in fan mode.

Heating mode

1 If $T_{in} \leq T_{set}$-1°C, heating mode act, reversing, compressor run, unit fan motor run in the set speed and the condition of avoiding the cold wind, sweep fan motor run in the set mode.
2 If Tin $\geq T_{set}$+2°C, compressor stop, reserving valve is still electric then unit fan motor run in the low speed.
3 If $T_{set} < T_{in} < T_{set}$+2°C, keep running in the old mode.
4 4-way valve stop in 4 min after unit stop.
5 When heating time exceed 45 min and $T_{de} \leq$ -8°C, defrosting mode act reversing valve and fan motor stop, compressor still run.
6 When defrosting time exceed 8 min and $T_{de} \geq$ +10°C, defrosting stop, heating mode act. Reversing valve run, fan motor run in the set speed and condition of avoiding cold wind.
7 Once heating mode act, and fan motor run in high or middle speed, electrical heater work and it won't work when fan motor run in low speed.
8 In heating mode, the range of T_{set} is 16°C ~ 30°C or it can be set in CON.
9 The conditions of avoiding cold wind, fan motor run in 30sec after compressor start.
10 The protection of compressor's delay. Compressor restart in 3min later after it stop and won't stop in the following by T_{in} and T_{set}.

AUTO mode

1 If $T_{in} \geq T_{set}$ +1°C, cooling mode act, T_{set} =26°C unit fan motor run in set speed.
If $T_{in} \leq T_{set}$ –2°C, compressor stop and fan motor run in low speed.
If T_{set} +2°C < T_{in} < T_{set} +1°C the unit run in old mode.
2 If $T_{in} \leq T_{set}$, heating mode act T_{set} =20°C. If $T_{in} \geq T_{set}$ +3°C, compressor and reversal valve stop, unit fan motor run in low speed. If $T_{set} < T_{in} < T_{set}$ +3°C, keep the old mode.
3 Press ∧ or ∨ to change T_{set} 1 ~ 2°C more or less.

Protection function
They are same as the protection functions of cooling or heating mode.
If Tin change, mode change first. There is no protection of compressor that compressor won't stop in the following 6 min once it run.

Others control

1 Timer
2 Manual operation
3 Sleep
4 Motor speed
5 Sweep motor
6 Running indicate light
7 Timer indicate light
8 Compressor indicate light
9 Buzzer

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